

on anatomy, physiology, human development, nutrition, safety, cleanliness, protection against disease, dental care, vision and hearing protection, human relations, family unity, the optimum age of pregnancy and child responsibility, the hazard of drugs, abortion and of prolonged use of the Pill, and many other factors.

The curriculum should be formulated jointly by physicians, educators, psychologists and sociologists.

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Microwave and Man

To the Editor: In reference to the article: Merckel C: Microwave and Man—The Direct and Indirect Hazards and Precautions. *California Medicine* 117:20-24, July 1972; on page 23, I am mentioned [Column 1, paragraph 2, lines 1-4].

I would call your attention to the fact that the fatality I reported was not due to a ruptured appendix and this was not proved at autopsy.

The paucity of non-lethal effects as mentioned by the author is at variance with the effects on chromosomes described by Heller,¹ and Yao and Jiles.²

Our knowledge of the biological effects of non-ionizing radiant energy is limited and the "State of the Art" is not enhanced by published error of omission or commission.

JOHN T. McLAUGHLIN, M.D.
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1. Heller JH: Cellular Effects of Microwave Radiation—Biological Effects and Health Implications of Microwave Radiation, Symposium Proceedings, 116-121, 9/17/69. USD HEW

2. Yao KTS, Jiles MM: Effect of 2450 MHZ Microwave Radiation on Cultivated Rat Kangaroo Cells. *IBID* 123-133.

EDITOR'S NOTE: The cited case was reported by Dr. McLaughlin in *California Medicine* 86:336-339, July 1957. The appendix was described in the pathologist's report as intact with proximal stenosis, and the lumen contained and the surface was covered with sterile pus. There was a subsequent evisceration of the wound and a perforation of the jejunum was found at a second operation following which the patient died. The diagnosis at autopsy was enteritis, type undetermined, with sub-acute suppurative peritonitis.

IF YOU THINK IT'S SHOCK, CATHETERIZE THE BLADDER

The first thing you do when you suspect shock is put a catheter into the patient's bladder and say to yourself dogmatically, "If this patient can put out 20 to 30 cc of urine per hour, he is not in shock." I will tell you, if I must use a statistic, that 99.9 percent of the time this is the finest index of perfusion you can have. I am not talking about the patient with diabetes insipidus. I am talking about the average patient in shock. . . .

Now the more sophisticated individual will say, "What about central venous pressure?" I don't like to poke needles into the subclavian veins. I don't like to put a catheter up the basilic and up the cephalic and into the vena cava but if I have to I will. Rarely will I do that if my patient is putting out 20 to 30 cc of urine per hour. But if I can't get the information I need, if I can't get the catheter in, if there is renal damage, then I will have to consider measuring central venous pressure. Measured in centimeters of water, 0 to 5 means hypovolemia; the patient is probably going to need fluids. Six to 12 could mean hypovolemia; check the patient's urine and his clinical signs, but look out. If the central venous pressure is over 15, don't pour a lot of fluids into the patient or you will kill him, because he is hypervolemic.

—PHILIP THOREK, M.D., Chicago
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